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FIGURE 1

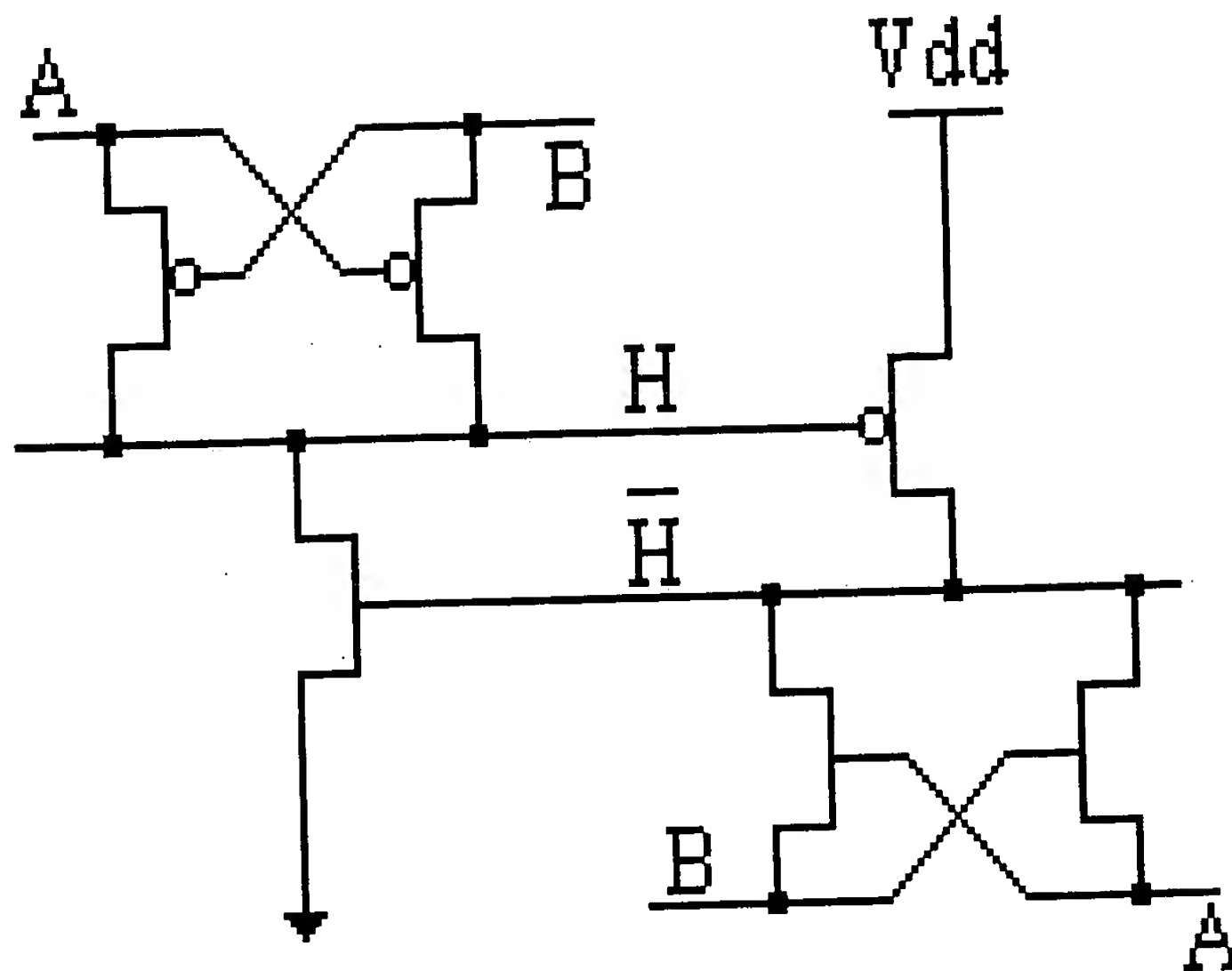
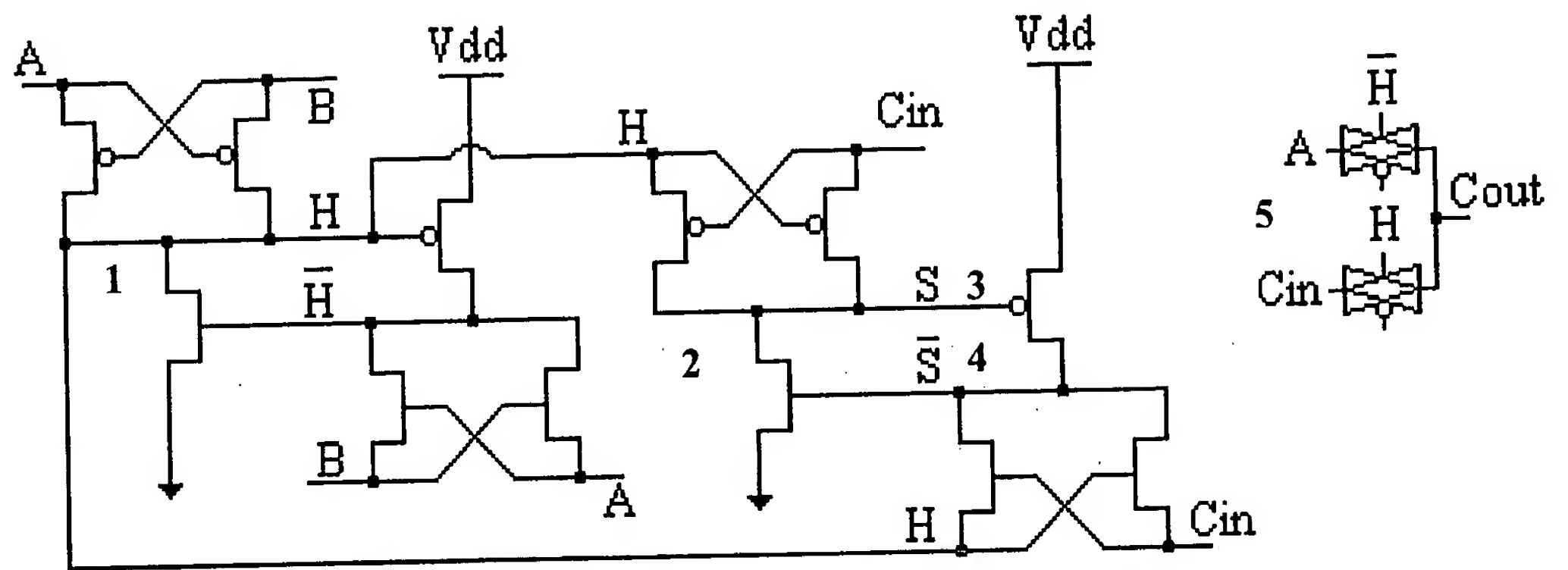


FIGURE 2



$$H = A \oplus B, \quad S = H \oplus C_{in}, \quad C_{out} = \bar{H}(A) + H(C_{in})$$

	Cin	W	X	Y	Z	Carry	Out	S
0	0	0	0	0	0	0	0	0
1	0	0	0	0	1	0	0	1
1	0	0	0	1	0	0	0	1
2	0	0	0	1	1	0	1	0
1	0	0	1	0	0	0	0	1
2	0	0	1	0	1	0	1	0
2	0	0	1	1	0	0	1	0
3	0	0	1	1	1	0	1	1
1	0	1	0	0	0	0	0	1
2	0	1	0	0	1	1	0	0
2	0	1	0	1	0	1	0	0
3	0	1	0	1	1	0	1	1
2	0	1	1	0	0	1	0	0
3	0	1	1	0	1	0	1	1
3	0	1	1	1	0	0	1	1
4	0	1	1	1	1	1	1	0
1	1	0	0	0	0	0	0	1
2	1	0	0	0	1	1	0	0
2	1	0	0	1	0	1	0	0
3	1	0	0	1	1	0	1	1
2	1	0	1	0	0	1	0	0
3	1	0	1	0	1	0	1	1
3	1	0	1	1	0	0	1	1
4	1	0	1	1	1	1	1	0
2	1	1	0	0	0	1	0	0
3	1	1	0	0	1	1	0	1
3	1	1	0	1	0	1	0	1
4	1	1	0	1	1	1	1	0
3	1	1	1	0	0	1	0	1
4	1	1	1	0	1	1	1	0
4	1	1	1	1	0	1	1	0
5	1	1	1	1	1	1	1	1

FIGURE 3A

	Cin	W	X	Y	Z	Carry	Out	S
0	0	0	0	0	0	0	0	0
1	0	0	0	0	1	0	0	1
1	0	0	0	1	0	0	0	1
2	0	0	0	1	1	0	1	0
1	0	0	1	0	0	0	0	1
2	0	0	1	0	1	0	1	0
2	0	0	1	1	0	0	1	0
3	0	0	1	1	1	0	1	1
1	0	1	0	0	0	0	0	1
2	0	1	0	0	1	1	0	0
2	0	1	0	1	0	1	0	0
3	0	1	0	1	1	0	1	1
2	0	1	1	0	0	1	0	0
3	0	1	1	0	1	0	1	1
3	0	1	1	1	0	0	1	1
4	0	1	1	1	1	1	1	0
1	1	0	0	0	0	0	0	1
2	1	0	0	0	1	1	0	0
2	1	0	0	1	0	1	0	0
3	1	0	0	1	1	0	1	1
2	1	0	1	0	0	1	0	0
3	1	0	1	0	1	0	1	1
3	1	0	1	1	0	0	1	1
4	1	0	1	1	1	1	1	0
2	1	1	0	0	0	1	0	0
3	1	1	0	0	1	1	0	1
3	1	1	0	1	0	1	0	1
4	1	1	0	1	1	1	1	0
3	1	1	1	0	0	1	0	1
4	1	1	1	0	1	1	1	0
4	1	1	1	1	0	1	1	0
5	1	1	1	1	1	1	1	1

FIG 3B

	Cin	W	X	Y	Z	Carry	Cout	S
0	0	0	0	0	0	0	0	0
1	0	0	0	0	1	0	0	1
1	0	0	0	1	0	0	0	1
2	0	0	0	1	1	0	1	0
1	0	0	1	0	0	0	0	1
2	0	0	1	0	1	0	1	0
2	0	0	1	1	0	0	1	0
3	0	0	1	1	1	0	1	1
1	0	1	0	0	0	0	0	1
2	0	1	0	0	1	1	0	0
2	0	1	0	1	0	1	0	0
3	0	1	0	1	1	0	1	1
2	0	1	1	0	0	1	0	0
3	0	1	1	0	1	0	1	1
3	0	1	1	1	0	0	1	1
4	0	1	1	1	1	1	1	0
1	1	0	0	0	0	0	0	1
2	1	0	0	0	1	1	0	0
2	1	0	0	1	0	1	0	0
3	1	0	0	1	1	0	1	1
2	1	0	1	0	0	1	0	0
3	1	0	1	0	1	0	1	1
3	1	0	1	1	0	0	1	1
4	1	0	1	1	1	1	1	0
2	1	1	0	0	0	1	0	0
3	1	1	0	0	1	1	0	1
3	1	1	0	1	0	1	0	1
4	1	1	0	1	1	1	1	0
3	1	1	1	0	0	1	0	1
4	1	1	1	0	1	1	1	0
4	1	1	1	1	0	1	1	0
5	1	1	1	1	1	1	1	1

FIGURE 3C

FIG 3D

Cin = W	Carry	Cout	Sum
0	Cin	Co	S
1	S	Co	S

FIGURE 4

